

CLAIMS

1. A water-soluble keratin derivative, obtained by the processing of poultry feathers by the following steps:

- (1) an alkali desulfurization and water solubilization reaction step; and
- (2) a step of separating the water-soluble main component, or obtained by the above (1) and (2) and:
- (3) a high energy wave irradiation step.

2. The water-soluble keratin derivative according to Claim 1, wherein the molecular weight is from 5 to 50 kDa.

3. The water-soluble keratin derivative according to Claim 1 or 2, wherein an alkali with a concentration of at least 1.1% is used in an amount of at least 2 wt% with respect to the feather weight.

4. The water-soluble keratin derivative according to Claim 1, 2, or 3, wherein UV-C is used as the primary source of high energy waves.

5. A high energy wave absorber containing the water-soluble keratin derivative according to any of Claims 1 to 4.

6. A fluorescent material containing the water-soluble keratin derivative according to any of Claims 1 to 4.

7. A material weatherproofness improver containing the water-soluble keratin derivative according to any of Claims 1 to 4.

8. A water repellant containing the water-soluble keratin derivative according to Claim 1, 2, or 3.

9. The high energy wave absorber according to Claim 5, wherein the high energy waves are ultraviolet rays or an electron beam.